## REMARKS

Claims 1-2, 10 and 12-13 are pending in the Application. Claims 4, 5-6, 8, and 9 have been cancelled. Claims 1, 7, 11 and 13 have been amended. Support for the amendments to Claim 1 can be found in the specification at page 2, lines 10-15, page 4, lines 7-11, and in Claims 3, 5 and 6, as originally filed. Support for the amendments to Claim 7 can be found in the specification at page 5, lines 25-29, as originally filed. No new mater has been added.

## OBJECTIONS

The Office Action indicates that:

The table on page 16 with respect to Example 1 is objected to since the amount for maize oil is missing (page 3, 3rd full paragraph).

A copy of the table on page 16 as filed is included herewith. Applicants respectfully request that the Examiner specify what amounts are missing. Reconsideration is requested.

## REJECTIONS UNDER 112

Claim 7 stands rejected under 35 USC 112, second paragraph as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The rejection should be withdrawn in view of the remarks below.

Claim 7 has been amended in light of the comments in the outstanding Office Action.

## REJECTIONS UNDER 103

1. Claims 1-13 stand rejected under 35 USC 103(a) as being unpatentable over et al. The rejection should be withdrawn in view of the remarks below.

The Office Action alleges that:

> The instantly recited "containing" which is same as "comprising" permits the presence other component even in a major amount. Thus, the epoxidized block copolymer still meets the instant invention. Also, the comparison must be based on the closest prior art, and not applicant's own choice. The nature of components

used in working and comparative examples such as NAPVIS, Poly 10, Admoll D0, Oppanol B200, Royaltuf 372 and WX270, is not taught and thus any unexpected result cannot be ascertained. Besides, said examples contain a major amount of polycarbonate or polyamidie not claimed and thus have little probative value. The presence of any amount of processing aids and AES resin in the polycarbonate composition of Katayama et al would yield "Δsoft phase" being increased since the polycarbonate has a higher Tg than said processing aids and AES.

Applicants' invention is related to thermoplastic molding composition containing, an acrylonitrile/ethylene-a-olefine rubber/styrene graft polymer, an amount of an additive compound being at least one member selected from the group consisting of triglycerides with at least one fatty acid with 12 to 24 carbon atoms, polybutenes and polyisobutenes having a weight average molecular weight of 600 to 10000, and ethylene propylene ter-polymer (EPDM) oil having a molecular weight of 1000 to 30000, and containing at least one member selected from the group consisting of polycarbonate, polyamide, polyalkylene terephthalate and (co)polymers of vinyl aromatic monomers.

Katayama et al discloses compositions comprising a polycarbonate-series resin having a terminal hydroxyl group content of 1 mol % or above (relative to the whole of the terminals) and a diene-series block copolymer (consisting of a block copolymer C and an epoxy-modified or epoxy group-containing block copolymer and an acid modified or acid group containing block copolymer of the block copolymer C). Further, Katayama et al discloses compositions comprising a polycarbonate-series resin having a terminal hydroxyl group (as described under (i)) a diene-series block copolymer (as described under (i)) and a thermoplastic resin (such as polyesterseries resin, polyamide-series resins, rubber-modified or rubbercontaining polymers, polysulfide-series resins, acrylic resins, and polyolefinic resins.

Further, Katayama et al discloses compositions (I) and/or (ii) that may contain flame retardants (halogen containing compounds, phosphorous containing compounds, organic or inorganic antimony compounds, inorganic flame retardants etc.), optionally flame retardant auxiliary (triazine compounds, novolok resins, metal compounds, etc), and further optionally additives like flowability improving agents (e.g. aliphatic hydrocarbons (like polyolefin wax etc.), higher fatty

acid esters (stearic acid triglyceride etc.), higher alcohols etc.), or other additives like talc, reinforcing agents, antistatic agents, lubricants, mold release agents, plasticizers etc. The amount of flowability improving agents can be selected within the range of 0.1 to 10 pbw. (Katayama et al, col. 20, line 4 - 5).

Katayama et al is using special types of polycarbonates having a terminal hydroxyl group content of 1 mol % or above and a diene-series block copolymer (consisting of a block copolymer C and an epoxy-modified or epoxy group-containing block copolymer and an acid modified or acid group containing block copolymer of the block copolymer C). Optionally, the above mentioned special type of polycarbonate and special type of diene-series block copolymer are used in a blend with rubbermodified polymers such as AES graft polymer, etc. or blended with polyamide-series resins. Further optional additives like aliphatic hydrocarbons or higher fatty acid esters are used, and Katayama et al does not teach the effect of the additives of Applicants' invention.

Moreover, the examples disclosed by Katayama et al contain neither acrylonitrile/ethylene-a-olefine rubber/styrene graft polymer nor additives of Applicants' invention. Thus, Katayama et al does not anticipate Applicants' invention.

Katayama et al provides molding compositions that are excellent in moldability and useful for producing molded articles having a good external appearance and impact resistance by improving the compatibility of a polycarbonateseries resin with a diene-series copolymer. Katayama et al also discloses providing a thermoplastic resin composition that is comparable in flowability and impact resistance to polymer blends of a polycarbonate-series resin and an ABS resin. Further, Katayama et al provides a thermoplastic resin composition with high safety, non-corrosiveness and high fire retardancy (Katayama et al, column 2, lines 21 - 41).

Applicants' invention is related to compositions containing an acrylonitrile/ethylene-a-olefine rubber/styrene graft polymer and containing at least one member selected from the group consisting of polycarbonate, polyamide, polyalkylene terephthalate and (co)polymers of vinyl aromatic monomers with improved toughness at low temperatures without substantially changing the melt

volume rate. The problem was solved by using the additives including additive compounds of Claim 1.

Therefore, there is no teaching or suggest from Katayama et al about toughness at low temperatures without substantially changing the melt volume rate. Accordingly, reconsideration is requested.

2. Claims 1-13 stand rejected under 35 USC 103(a) as being unpatentable over Katayana et al in view of Dalal et al, Nodera or WO 02/32993. The rejection should be withdrawn in view of the remarks below.

Dalal et al

Dalal et al discloses toner compositions comprising at least one metal-containing pigment or dye and at least one metal-free pigment or dye, or at least one pigment or dye containing a regulated metal and at least one pigment or dye containing a nonregulated metal, at least two pigments or dyes each containing a different regulated metal below its regulated threshold or pigments or dyes which contain materials which are regulated for other reasons. The toner compositions may contain further additives like binders resins, pigments, dyes, charge controls agents, lubricating waxes, and/or conducting agents. Further optional, external additives may be applied. External additives may include any additives suitable for use in electrostatographic toners, including fumed silica, silicon derivatives, ferric oxide, hydroxyl terminated polyethylenes such as Unilin, polyolefin waxes (low molecular weight including Mw 1,000 to 20,000 (Dalal et al, Col. 7, lines 59 - 67).

Dalal et al does not teach or suggest additives of Applicants' invention. Further, Dalal et al does not even mention thermoplastic compositions of Applicants' invention. Also, the examples disclosed by Dalal et al do not teach or suggest Applicants' invention. Therefore, there is no motivation for one skilled in the art to combine Dalal et al with Katayama et al to improve the toughness at low temperatures without substantially changing the melt volume rate of compositions containing an acrylonitrile/ethylene-a-olefine rubber/styrene graft polymer and containing at least one member selected from the group consisting of polycarbonate, polyamide, polyalkylene terephthalate and (co )polymers of vinyl aromatic monomers.

Nodera

Nodera discloses thermoplastic resin compositions comprising a polycarbonate resin, a styrenic resin and ester of pentaerythritol and a saturated aliphatic carbonic acid (Nodera, column 3, line 20 - 25). Nodera discloses sytrenic resin and rubber-like polymer modified styrenic resins, e.g. HIPS, ABS, MBS, SBS, SBR etc. (Nodera, column 4, line 58 - column 5, line 29). The composition further can contain a rubber-like elastomer such as SBS, SBR, grafted rubber-like elastomers which are preferably polymers obtained from monomers of essentially alkyl-acrylates or alkyl metacrylates and dimethylsiloxane (Nodera, column 6, line 21 - column 7, line 38). The composition may also comprise a polyolefin wax, including polyethylene wax (Mw is preferably 1,000 to 5,000) and polypropylene wax (Mw is preferably 15,000 to 40,000).

Nodera teaches a preferred use of polyethylene. The polyolefin wax is used to further improve the mold releaseability when combined with ester of pentaerythritol and a saturated aliphatic carboxylic acid (column 6, line 5 - 20).

Thus, Nodera does not teach or suggest that additives according to Applicants' invention improve the toughness at low temperatures without substantially changing the melt volume rate. Moreover, one skilled in the art would determine that on the one hand polyolefines should preferably be based on ethylene, and on the other hand would determine that the use of poly(iso)butylenes instead of polypropylene would require an increase of molecular weight to > 40,000 of the polyolefin when used as an additive for thermoplastic compositions.

In contrast, Applicants' invention includes polybutenes and polyisobutenes having a Mw of 6,000 to 10,000. Therefore, Nodera, alone or in combination with Katayama et al, teaches away from Applicants' invention of Claim 1.

WO 02/32993

Katayama et al combined with WO 02/32993 would yield compositions comprising a polycarbonate-series resin having a terminal hydroxyl group, a diene-series block copolymer, at least one butyl-type rubber as thermoplastic resin, at least one filler (calcium carbonate, clay, mica, silica, carbon black etc.) and polybutene processing oil having a number average molecular weight of at least 400 in one

embodiment, and a number average molecular weight of less than 10,000 in another embodiment (WO 02/32993, page 2, line 30 - page 3, line 4).

In contrast, Applicants' invention includes compositions comprising AES-rubber as thermoplastic resin. Thus, the combination of Katayama et al with WO 02/32993 does not teach the same polymer compositions. Moreover, Katayama et al alone or in combination with WO 02/32993 about the improvement of toughness at low temperatures without substantially changing the melt volume rate.

Regarding the nature of the components used in working and comparative examples, these products are commercially available and the following table includes a summary of information related to these products.

As an example, detailed information about the additive Oppanol B200 is attached. Please note, that Poly® 10 is sold by Univar GmbH and the product has been renamed to Dynapak Poly 190.

| Brand name | Producer | Composition | Weight average molecular weight |
|---|---|---|---|
| Napvis D2 | BP | Poly(iso )butene | 590 |
| Napvis D5 | BP | Poly(iso )butene | 780 |
| Napvis D07 | BP | Poly(iso )butene | 440 |
| Poly® 10 | Univar GmbH | Poly(iso )butene | 1,000 |
| Oppanol B200 | BASF | Polyisobutene | 4,100,000 |
| maize oil | Unilever, Mazola® | Triglyceride of fatty acid | |
| Blendex® WX 270 | Ube Cycon Ltd, Tokyo, JP | AES | |
| Royaltuff 372 | Uniroyal, GB | AES | |

The Office Action alleges that the rejection is maintained for reasons discussed above.

In view of the above amendments, Applicants submit that the claims are in condition for allowance and the Examiner would be justified in allowing them.

Respectfully submitted,

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